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U.S. DEPT. OF AGRICULTURE. BUREAU OF
PLANT INDUSTRY. CONGRESSIONAL SEED
DISTRIBUTION.

Plan of distributing cotton seed, with
a description of the varieties obtained
for distribution. [n.d.]

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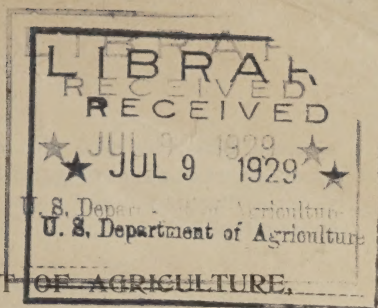
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U. S. DEPARTMENT OF AGRICULTURE.

BUREAU OF PLANT INDUSTRY.

Congressional Seed Distribution.

PLAN OF DISTRIBUTING COTTON SEED, WITH A
DESCRIPTION OF THE VARIETIES OBTAINED
FOR DISTRIBUTION.

The Bureau of Plant Industry has under way investigations in the improvement of cotton, and as a foundation for such work it is necessary to determine the varieties best suited to each section of the cotton belt. The distribution of cotton seed this year has thus been modified with the view of furnishing growers with seed of new varieties to test in comparison with the varieties they already grow. This will enable them to make comparisons and select varieties best suited to their climatic and soil conditions. Information regarding the success of varieties in different sections is as yet too meager to enable a judgment to be formed as to which will succeed best in a certain locality. It is proposed hereafter in the distribution of cotton seed to select, so far as possible, new and little known varieties which have proven valuable in certain localities, and distribute the seed in such a way as to insure their being thoroughly tested throughout the cotton States. It is intended at the end of each season to follow up each package with a circular in order to obtain information in regard to the success in various sections of the varieties distributed. Growers receiving the seed are urged to cooperate with the Department of Agriculture by making

a careful test of the seed with which this circular is sent. In another part of the circular will be found descriptions of the varieties distributed and a statement of the points on which information is desired.

PLAN OF DISTRIBUTING THE VARIETIES.

The varieties of upland cotton selected for distribution this year are Braddy, Christopher, Culpepper, Russell, and Truitt. For distribution in the Sea Island cotton growing sections of Georgia and Florida, seed of Seabrook's Sea Island cotton has been obtained. The varieties are to be distributed to the different Congressional districts as follows:

ALABAMA:

First, Third, Fifth, and Eighth districts: Truitt and Braddy.

Second, Sixth, Seventh, and Ninth districts: Culpepper and Russell.

Fourth district: Christopher and Braddy.

ARKANSAS:

First, Second, Third, and Sixth districts: Christopher and Truitt.

Fourth and Fifth districts: Russell and Truitt.

FLORIDA:

First and Second districts: Seabrook Sea Island.

GEORGIA:

First, Second, and Eleventh districts: Seabrook Sea Island.

Fourth, Sixth, Seventh, and Ninth districts: Braddy and Russell.

Third and Fifth districts: Culpepper and Christopher.

Eighth and Tenth districts: Truitt and Russell.

LOUISIANA:

Third and Fourth districts: Christopher and Braddy.

Fifth and Sixth districts: Culpepper and Russell.

MISSISSIPPI:

Second and Sixth districts: Russell and Truitt.

First, Third, Fifth, and Seventh districts: Christopher and Culpepper.

Fourth district: Braddy and Christopher.

NORTH CAROLINA:

First, Third, Fourth, and Eighth districts: Russell and Truitt.

Second, Fifth, Sixth, and Seventh districts: Culpepper and Braddy.

SOUTH CAROLINA:

First district: Braddy and Truitt.

Third, Fourth, Fifth, and Seventh districts: Culpepper and Truitt.

Second and Sixth districts: Russell and Christopher.

TENNESSEE:

Third and Fourth districts: Russell and Christopher.

Fifth district: Truitt and Culpepper.

Sixth, Seventh, Ninth, and Tenth districts: Truitt and Culpepper.

TEXAS:

First, Second, and Thirteenth districts: Russell and Truitt.

Third, Fourth, Fifth, and Sixth districts: Russell and Culpepper.

Seventh, Ninth, Eleventh, and Twelfth districts: Truitt and Culpepper.

Eighth and Tenth districts: Truitt and Braddy.

OKLAHOMA: Truitt and Russell.

DESCRIPTION OF VARIETIES DISTRIBUTED.

BRADDY.

Braddy is an upland variety originated in Marion County, S. C., by L. C. Braddy. It was produced by selection from the "Simpson" cotton in 1884, and has been kept true to type and further improved by continual selection since that date. Mr. Braddy's method of selection is to go over his fields every year, selecting and marking the best formed and most prolific plants. The seed from these plants is picked and ginned separately from the main crop and used for planting a select field of about 20 acres the next year. The seed produced from these 20 acres serves to plant the main crop the third year.

This variety has not heretofore been formally introduced or widely disseminated, but has a good reputation in the

section where it was originated. The plant is of the Peterkin type, compact in habit, having an erect main stem with numerous limbs beginning close to the ground. It is vigorous and hardy and bears well. It resists adverse conditions of rain or heat without shedding its bolls badly, and is very free from rust, though it has not proved resistant to wilt disease. The bolls are borne singly on the long limbs. They are of medium size and open well, but retain the cotton so that it is

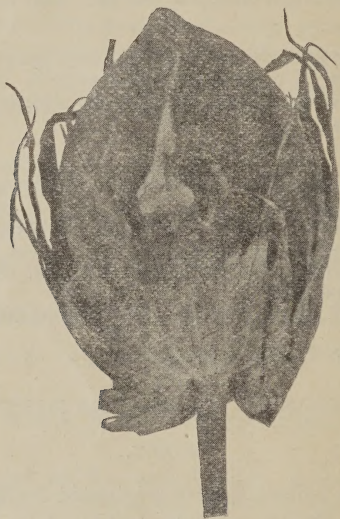


Fig. 1.—Boll of Braddy (natural size).

not easily blown out by storms. They are usually 5-locked with from seven to eight seed to the lock (see fig. 1). The seed are very small, averaging only about 0.088 gram in weight, and are gray and tufted. The relative proportion of lint is large, reaching 42 per cent in favorable seasons (36 per cent in samples from the crop of 1901). The lint is of good length, 1 to $1\frac{1}{8}$ inches, white and very curly or crinkled—a quality that commands a price slightly in advance of that of ordinary

cotton. The seed distributed by the Department of Agriculture is select seed grown by the originator of the variety, Mr. L. C. Braddy, at Little Rock, S. C.

CHRISTOPHER.

Christopher, or Christopher's Improved as it has been called, is an upland cotton originated by R. L. Christopher, at Asbury, Ga. This variety is the result of the selection of a single prolific stalk in a field of different sorts, and the mother variety is therefore unknown. After the first selection the variety was carefully bred for some three years and further improved in productiveness, etc. The variety is said by the originator to be almost free from rust and to resist

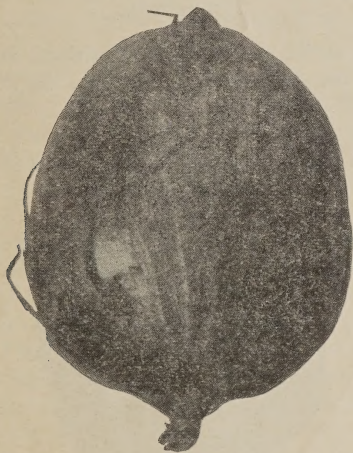


Fig. 2.—Boll of Christopher (natural size).

drouth very successfully, the tap root penetrating deeper than that of other varieties, enabling it to withstand extreme dry weather without serious injury. It is also described as enduring chilly weather without dropping its bolls.

Christopher is a big-bolled variety similar to Truitt and Culpepper. The lint is from 1 to $1\frac{1}{8}$ inches in length and of

good comparative strength, quality, and abundance. The crop furnishing this seed yielded from 32 to 34 per cent of lint. The seeds are comparatively large, weighing from 0.13 to 0.14 gram, and are gray and tufted, each lock bearing from eight to ten seeds (see fig. 2).

This variety has not been extensively grown, but has been tested by several experiment stations, where it has given good results. In the tests made by the Department of Agriculture at Columbia, S. C., in the season of 1901, it was selected as one of the four best varieties. In habit of growth and shape of boll it is quite similar to Truitt. The seed of this variety distributed is of select quality and was grown by R. L. Christopher, at Asbury, Ga., in the season of 1901.

CULPEPPER.

Culpepper is an improved big-boll variety, originated by J. E. Culpepper, in Merriwether County, Ga., in 1890. The

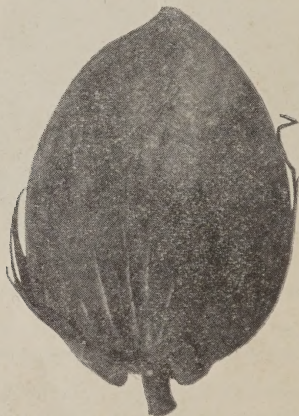


Fig. 3.—Boll of Culpepper (natural size).

variety is said by Mr. Culpepper to have been produced by the hybridization of Wyche and Dixon and to have been selected through some five years to fix and improve the type.

It is reported to be hardier and more prolific than either of the parents and to produce a better staple.

The bolls are large, and the locks are 7 to 10 seeded. The seeds are gray, tufted, and of medium size, averaging in weight from 0.13 to 0.14 gram (see fig. 3). The lint is from 1 to 1½ inches in length, of good quality, and abundant, giving an average of 32 to 34 per cent. The size of the seed, percentage of lint, etc., of course vary greatly with the conditions of soil and climate. The plant forms long limbs near the ground, which gradually become shorter toward the top. It is said to stand drouth very well and to shed its bolls very little.

This variety is well known locally, and has been tested at the Georgia and Alabama experiment stations, where it gave satisfactory results. In variety tests made by the Department of Agriculture at Columbia, S. C., in the season of 1901, it proved to be one of the best of all varieties experimented with for that section. The seed of this variety distributed is of select quality and was grown by J. E. Culpepper, of Luthersville, Ga., in the season of 1901.

RUSSELL.

This is a big-boll upland cotton, originated by J. T. Russell, at Alexander City, Ala., in 1895. The variety was introduced to the public by G. F. Park, of the same place, in 1897. The following is a description of the origin of the variety as given by Mr. Park: "He [Mr. Russell] found a stalk of cotton in his field with distinct foliage and seven extra large bolls open. Picking these bolls, he decided to experiment; so the following spring planted the seed in his garden and grew fifty-eight stalks from which he obtained 110 pounds of cotton. With the select seed from his 110 pounds he planted 1 acre, which produced 1,100 pounds of lint cotton. Again, from seed selected from this acre Mr. Russell planted his crop and made an average of over 1 bale per acre." This variety, while an accidental selection, is supposed by the originator to have been a cross of Truitt with Allen Long Staple, though this matter is entirely conjecture. After the first selection the

variety was developed and improved by careful selection carried on through several generations.

In appearance of the plant Russell resembles Truitt, having long branching limbs near the base. The bolls are large, usually 5-locked, and have from nine to ten seeds to the lock (see fig. 4). The seeds are large, weighing from 0.15 to 0.17 gram, and are tufted and green, this being one of the most

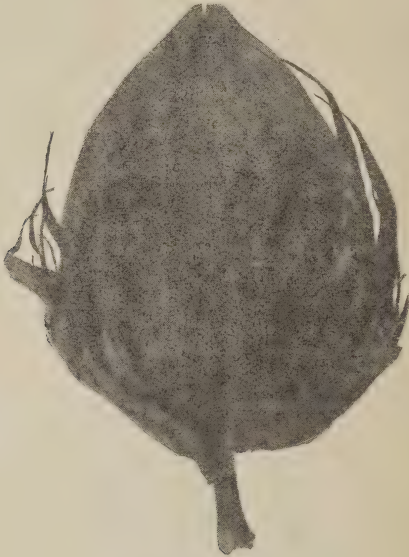


Fig. 4.—Boll of Russell (natural size).

distinctive characteristics of the variety. The lint is longer than that of the majority of upland cottons, being from $1\frac{1}{4}$ to $1\frac{3}{8}$ inches, and is of rather superior quality. The large seeds are well covered and give usually from 30 to 32 per cent of lint.

This variety has been tested at several experiment stations and found to give good results. It is recommended for its

large bolls, extra length of staple, productiveness, and resistance to drouth. The seed of this variety distributed was grown by G. F. Park, the introducer of the variety, at Alexander City, Ala., in the season of 1901.

TRUITT.

Truitt, or Truitt's Big Boll, is a race of cotton originated in Troup County, Ga., in 1885, by George W. Truitt. The variety was produced by selection from the so-called "Old Georgia

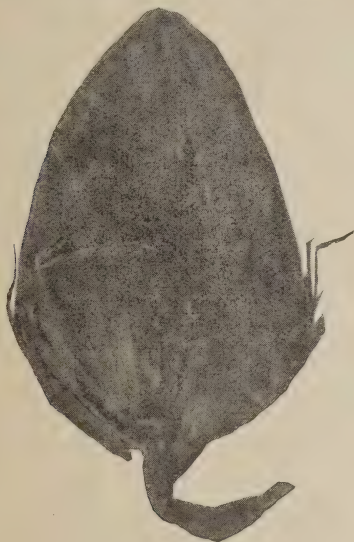


Fig. 5.—Boll of Truitt (natural size).

White Seed," which is said to have had a considerable local reputation. The originator says: "Some parts of my crop frequently showed in places, under high experimental cultivation, a very marked freak-like growth of such superiority and so prolific that I gathered and separated the seeds and continued the process until I had propagated a distinct, unknown variety. * * * The seed now uniformly produce the same

variety every year and are as true to kind as races of corn, wheat, or any other product." The type of the variety is said by Mr. Truitt to have been obtained primarily by two years of selection, but to have since been considerably improved.

The bolls are very large (fig. 5) and 4 to 6 locked. They open well and are easy to pick. The seeds are tufted, gray, and comparatively large, averaging about 0.14 gram in weight. They are well covered and yield from 31 to 33 per cent of lint. The lint is from $\frac{3}{4}$ to 1 inch long and of good quality for upland cotton.

Truitt cotton is now grown somewhat extensively in Georgia, Alabama, North Carolina, and South Carolina. In tests made at Columbia, S. C., in the season of 1901, it proved to be one of the best of about forty varieties. It has been carefully tested at the Alabama Agricultural Experiment Station for several years and has there given the best average yearly yield of any variety tested. In the eastern Southern States mentioned above this variety has been grown somewhat generally and is known to be a very good sort under most conditions. It should be more widely tested, however, and more generally cultivated in regions where it proves to be superior to other varieties. In Texas, Louisiana, Arkansas, and western sections, where it has not been generally grown, it should be given a thorough trial. The seed of the variety distributed was grown by George W. Truitt, the originator of the variety, at Lagrange, Ga., in 1901.

SEABROOK SEA ISLAND.

This variety was originated ten or twelve years ago by E. L. Rivers, James Island, S. C. Its selection and improvement has been carried on since that time by the present owner, Mr. F. P. Seabrook, of James Island, who has given the most careful attention to the fixing of the desired qualities, the aim being the production of a prolific bearer of medium quality, with a large proportion of lint to seed. The method of selection employed by Mr. Seabrook, which is similar to that of most of the Sea Island planters, is as follows: Several of the best plants in his field are selected and marked. Each of these

is picked by itself, the cotton weighed, and the lint weighed after ginning to determine the ginning average. The staple is examined critically as to length, fineness, and softness. Finally, the best plant is selected and the others discarded. The seed from this single stalk is planted by itself, one seed in a hill, and usually produces about 500 plants. The seed from these plants is used to sow 5 acres, from which the



Fig. 6.—Boll of Seabrook Sea Island (natural size).

general crop is planted the fourth year. A new plant is chosen from the select field each year, so that the process of improvement is continuous.

The variety is of compact habit, prolific, and resistant to disease. The bolls are long and pointed, and of good size, and open well for Sea Island (see fig. 6). The lint is 2 inches long. Three and a half pounds of seed are required for one pound of lint.

CULTURAL METHODS.

Cultivation of Upland Cotton.—The methods of cultivation which should be pursued in growing the varieties of upland cotton distributed are the same as those used for ordinary upland cottons. No exact directions can be given with respect to the distance apart of the rows or the distance between the plants in the row, as the space required by each plant is determined by the richness of the soil in each case. Christopher, Culpepper, Russell, and Truitt are large-boll varieties, quite similar in habit of growth, with long lower limbs. Under ordinary conditions satisfactory results would be obtained with these varieties by placing the rows 4 feet apart and the plants from 18 to 24 inches apart in the row. On rich soil this distance should be somewhat increased, while on sterile land closer planting would be desirable. The originator of Truitt cotton says in regard to that variety: "On upland the rows should be from 4 to $4\frac{1}{2}$ feet and the plants 3 feet apart; on bottom land the rows should be from 5 to $5\frac{1}{2}$ feet and the plants 4 feet apart. Braddy has not been so extensively tried as the other upland varieties, but should probably be handled about the same as King or Peterkin. It was developed on fertile, red, sandy loam, and on such soil it should be planted in rows from 4 to 5 feet apart with the plants 18 to 24 inches apart in the rows. The proper space varies with the soil conditions and can be determined only by experiment in each case.

Cultivation of Sea Island Cotton.—The Seabrook Selection of Sea Island cotton is adapted to light, sandy land of good fertility. It is planted in rows 5 feet apart, with a distance of from 18 to 20 inches between the plants in the row. Greater care must be given to the cultivation of Sea Island than is usually given to upland cotton. The land should be thoroughly prepared and well fertilized. A suitable rotation with corn, cowpeas, peanuts, or other crops should be practiced in order to avoid the exhaustion of the soil produced by many successive cotton crops. Cultivation should be very frequent. In the Sea Islands the cotton is cultivated on an average of

once a week until August. Here the cotton is grown on high beds and the soil drawn up around the plants in cultivation. This method is not recommended for Georgia and Florida, however, where the more economical method of level culture will probably pay best.

Particular care is necessary in picking and handling Sea Island cotton in order to obtain the highest price. Sea Island cotton requires to be picked often—every week or ten days—to avoid staining by the weather. All trash, bits of bolls, immature and diseased or yellow locks must be picked out by hand. The seed cotton should be spread on an arbor or low roof and exposed to the sun for several hours to dry before storing. It must be ginned on a roller gin and be packed carefully in bags without high pressure.

REPORT OF RESULTS DESIRED FOR PUBLICATION.

In order to determine the comparative values of the different varieties of cotton in various parts of the United States, the growers receiving this seed are requested to give it a thorough trial in comparison with the variety or varieties that they generally grow and be prepared in the fall of 1902 to report the results of the test to the Department of Agriculture. A report will then be requested covering the following points:

- (1) Character of the soil.
- (2) Character of the season.
- (3) Total yield of seed cotton produced. (This should be determined by actually weighing the product.)
- (4) Total yield of lint produced. (Determined by actual weighing.)
- (5) Size of patch grown. (Determined by actual measurement.)
- (6) Yield per acre, estimated from the patch grown.
- (7) Is the variety to be classed as excellent, good, fair, or poor for your section?
- (8) Name of the variety ordinarily grown by the planter making the test.

(9) Yield of ordinary variety this year on same soil as the variety under consideration.

It is especially requested that growers carefully note the points enumerated above in order that they may secure the necessary data and be ready to supply accurate information when it is requested next fall. If data sufficiently accurate is furnished, a report will be compiled and issued giving the results of the various trials in all localities, and this report will be sent to all planters cooperating in the experiment. In this way it is hoped to obtain valuable and reliable information in regard to the varieties best adapted to various sections of the cotton belt.

Growers receiving this seed, who are willing to cooperate with the Department of Agriculture in making the above test, are requested to fill in the accompanying franked postal card, as soon as the seed is received, and return the same to the Department.

HOW TO GROW PURE SEED OF GOOD QUALITY.

It is a well-known fact that varieties of cotton become mixed and impure unless special care is taken to prevent crossing with other varieties. If growers receiving seed of any of the above varieties desire to grow the same variety another year, precaution should be taken to plant the seed in an isolated patch situated as far as possible from any other varieties. It should be at least a quarter of a mile from any other cotton and preferably in a field surrounded by a forest, particularly on the side nearest to other cotton fields. Aside from this precaution, before any seed is gathered for planting all plants which are not true to the type of the variety should be carefully weeded out.

If it is desired to keep the variety up to its full productiveness and better adapt it to local conditions the planter may easily accomplish this by following a simple and inexpensive method of selection. Before beginning the picking go over the patch carefully and select and mark with a white rag the

best plants, that is, those most productive, earliest in ripening, and having the largest, best formed, and most numerous bolls. Care should also be exercised to select plants that are true to the type of the variety. Before each picking, send a careful man over the patch to pick the seed from the selected plants. Preserve such seed separately, gin it separately to avoid mixing, and use this to plant the crop the next year. If this method of selection is carried out each year, the yield can doubtless be greatly increased and as much or more added to the crop than would result from special manuring or cultivation, though these factors should by no means be neglected. The importance of careful seed selection is seldom fully recognized, and growers are urged to give this factor of cultivation more careful attention.



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